

Serial No.: 10/030,806
Response dated 10 August 2004
Reply to Office Action mailed 10 March 2004

REMARKS

This application has been reconsidered carefully in light of the Office Action dated as mailed on 10 March 2004. A careful reconsideration of the application by the Examiner in light of the following remarks is respectfully requested.

Claims 1, 2, 4, 7, 9-18, 21 and 22 remain in the application.

Allowable Subject Matter

As a preliminary matter, the undersigned wishes to thank Examiner Clinger for the allowance of Claim 22. Further, the Examiner indicated that Claims 11-13 and 15 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

By the Amendment dated 24 December 2003, Claims 11 and 15 were rewritten in independent form, as suggested by the Examiner. Claims 12 and 13 each depends from amended independent Claim 11. Thus, Claims 11-13 and 15 are believed to be in condition for allowance and notification to that effect is solicited.

Drawing Objections

The Office Action Summary indicates that the drawings filed on 11 January 2002 are objected to by the Examiner. However, the Office Action does not include any drawing objection or a Notice of Draftsperson's Patent Drawing Review,

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PTO-948. Further, the previous Office Action mailed 25 September 2003 indicated that the drawings were accepted. Clarification is respectfully requested.

Claim Rejections - 35 U.S.C. § 102(b)

Claims 1, 4, 14, 16, 17 and 21 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,016,462 (hereinafter "Pavliny"). This rejection is respectfully traversed, particularly in view of the following remarks.

Independent Claim 1 requires the limitation of "..., *the mast passing through an opening in the roof of the chamber with a foot at the lower end of the mast supported by the base of the chamber,...*" Independent Claim 1 further requires the limitation that "*the base of the chamber acts as a structural foundation for the mast and the roof of the chamber serves as a lateral support means to restrain lateral movements of the mast at a position above the base without transfer of bending moments between the mast and the foundation structure.*" Independent Claim 21 includes similar limitations.

The Examiner alleges that Figure 1 of Pavliny discloses "a mast (34) supporting an antenna (58), a foundation (not numbered, house foundation), and an underground enclosed chamber (basement) with a roof (basement ceiling), base (floor), electronic equipment (54) and shell (walls) all as recited."

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For a reference to anticipate a claim, the reference must disclose each and every element or limitation of the claim. Pavliny does not disclose each and every element or limitation of independent Claims 1 and 21. Pavliny discloses a lightning protection system for residential buildings equipped with inside plumbing. The system includes a series of interconnected waste pipes connecting the vent stack to the soil pipe and establishing a grounding circuit. A ground lead 26 is connected to a **mast 30 of an antenna 28**, which is strapped to a chimney 34 extending above the roof, as shown in Fig. 1 of Pavliny. See Pavliny at Col. 2, lines 23-28.

Pavliny does not disclose a mast that passes through an opening in the roof of the chamber with a foot at the lower end of the mast supported by the base of the chamber, as required by independent Claims 1 and 21. Further, Pavliny does not disclose a roof of the chamber that serves as a lateral support means to restrain lateral movements of the mast at a position above the base without transfer of bending moments between the mast and the foundation structure, as required by independent Claims 1 and 21. Rather, the antenna mast 30 of Pavliny is rigidly strapped to the chimney 34.

Each of Claim 1 and 21 requires a momentless connection between the mast and the foundation structure. One skilled in the art of telecommunications mast installations will appreciate that tall masts, such as the masts used in a cellular

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telephony network, are subjected to substantial wind and other lateral forces. If there is a rigid connection of the mast to its foundation structure, lateral forces on the mast generate bending moments in the mast which are then transferred to the foundation structure. Accordingly, the foundation structure must be sufficiently robust or massive to withstand not only the vertical loading imposed on it, but also the imposed bending moments.

To avoid the necessity for a foundation which can take both vertical load and bending moments, the mast of the present invention does not transfer bending moments to the foundation structure at all. This can be achieved by the seating arrangement at the foot of the mast as described at page 5 of the specification. Thus, the foundation structure in the present invention is required to take vertical loading only and there is no need for any massive structure, robust reinforcement or the like to enable the submerged chamber to take moment or rotary forces.

In a conventional house structure such as disclosed in Pavliny, the lower end of a chimney, like the lower edges of the walls, is in accordance with normal building practice anchored rigidly to the foundation on which the slab rests. Thus, lateral forces on the chimney will generate bending moments in the chimney which are then transmitted to the base and foundation structure. In a simple house this is not a major problem because the house itself will generally be sufficiently massive to

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resist the resultant, imposed moments. Also a house chimney does not itself project any great distance above the roof, so lateral forces imposed thereon by wind and the like will not in any event generate any meaningful bending moments.

In the case of a cellular telephony network, with which the present invention is primarily concerned, there will invariably be a very large number of base stations each requiring a transmission mast. Cost is accordingly of major concern in the establishment of the network. By avoiding the necessity for base station chambers sufficiently massive and robust to take substantial bending moments, the present invention provides considerable cost savings.

It is further submitted that in a house construction, such as disclosed in Pavliny, transmission of bending moments from the chimney is of minor or no concern at all. For this reason, Pavliny does not provide any suggestion of a momentless chimney/foundation arrangement, similar to the telecommunications mast installation as claimed by the present invention.

Applicants believe that the above remarks overcome the rejection of Claims 1, 4, 14, 16, 17 and 21 under 35 U.S.C. § 102(b). Applicants respectfully request withdrawal of this rejection.

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Claim Rejections - 35 U.S.C. § 103(a)

Claims 2, 7, 9, 10 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Pavliny in view of U.S. Patent 6,557,312 (hereinafter "McGinnis"). This rejection is respectfully traversed, particularly in view of the following remarks.

Claims 2, 7, 9, 10 and 17 depend, directly or indirectly, from independent Claim 1, which Applicants believe is patentable for at least the reasons presented above. Applicants respectfully request withdrawal of this rejection.

Conclusion

It is believed that the above Amendment places all pending claims in condition for allowance and notification to that effect is solicited. However, should the Examiner detect any remaining issue or have any question, the Examiner is kindly requested to contact the undersigned, preferably by telephone, in an effort to expedite examination of the application.

Respectfully submitted,



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